ATTACHMENT D

Goods Movement Control Measures

HIGH-SPEED TRANSPORT SYSTEM

SOURCE CATEGORY:	LOCOMOTIVES (FREIGHT)	
CONTROL METHODS:	ALTERNATIVE TECHNOLOGY, HIGH SPEED TRANSPORT SYSTEM	
EMISSIONS (TONS/DAY):		
SUMMER PLANNING	**2014**	**2023**
NOx INVENTORY	18	23
NOx REDUCTION	18	23
NOx REMAINING	0.0	0.0
CONTROL COST:	Based on partially self-financing business plan and public/private partnership	
IMPLEMENTING AGENCIES:	Consortium under jurisdiction of Joint Powers Authority	

DESCRIPTION OF SOURCE CATEGORY

Diesel-electric locomotives have a large diesel engine (main traction engine) for generating electric power which in turn drives electric motors in each axle. Modern line-haul or freight locomotives have 4400-horsepower diesel engines with six drive axles. Switch locomotives are smaller, and usually older, four-axle locomotives, with 1200-2500 horsepower engines.

PROPOSED METHOD OF CONTROL

This control measure envisions moving cargo from the San Pedro Bay Ports to an inland port facility. Goods would be shuttled from the Ports to an inland port at San Bernardino and/or Palmdale via a zero-emissions high speed transport (HST) system (see section on Innovative Goods Movement Technology in main volume of Appendix IV-C). Such a system capitalizes on the inherent savings of multiple uses on a single infrastructure by operating on shared alignments with a people movement system. The technology permits operation of freight vehicles on a shared guide-way with passenger vehicles even during peak hour service. Freight vehicle trips can be interspersed with passenger trips while still meeting required passenger vehicle headways. Additionally, full utilization of the freight line can be achieved during the passenger system's off-peak hours.

A map depicting a preliminary HST network is shown in the goods movement section of Appendix IV-C.

EMISSION REDUCTION

The preliminary emission reduction estimates are based on replacing 100% of the freight locomotives with a zero-emission system, including a high speed transport system. The preliminary emission reduction estimates do not account for emissions associated with the incremental increase in electricity generation which may be needed.

The emission reduction commitments for AQMP control measures are discussed in Chapter 4 of the main volume of the AQMP. It is proposed that ARB take on the full legal commitment to backstop the reductions of this control measure if necessary; however, both SCAG and the AQMD have agreed to an annual review meeting to monitor the implementation of these measures and to explore additional controls that both the AQMD and SCAG can implement to backstop the original measures.

IMPLEMENTING AGENCY

Implementation of the HST system is being proposed on the basis of a potentially self-financing business plan approach based on aviation, commuter, and freight operations and further bolstered by HST system related development. A schematic of the business plan is shown in the goods movement section of Appendix IV-C. The deployment of a HST system would create value in associated components which could in turn contribute to the HST's total financial performance. A business and institutional structure for the movement of people, movement of goods, and associated development patterns has been developed by SCAG to serve as the basis for implementation of the movement systems. The results reached by SCAG's business planning effort indicate that HST-based systems for aviation, goods, and people movement can fulfill the objective of financial independence and feasibility.

A consortium under jurisdiction of Joint Powers Authority would be necessary to implement this control measure.

TRUCK-ONLY LANES

SOURCE CATEGORY:	ON-ROAD HEAVY-DUTY DIESEL FREIGHT TRUCKS	
CONTROL METHODS:	PORT TRUCKS: TRUCK-ONLY LANES; TWO CONTAINERS PER TRACTOR	
EMISSIONS (TONS/DAY):		
SUMMER PLANNING	**2014**	**2023**
NOx INVENTORY	18	15
NOx REDUCTION *	9.0	7.5
NOx REMAINING	9.0	7.5
CONTROL COST:	Based on partially self-financing business plan and public/private partnership	
IMPLEMENTING AGENCIES	Consortium under jurisdiction of Joint Powers Authority	

* The estimated emission reductions do not account for potential emission benefits of any heavy duty-diesel truck control measures proposed by the San Pedro Bay Ports, the ARB, or AQMD.

DESCRIPTION OF SOURCE CATEGORY

Emissions from heavy-duty diesel mobile sources continue to represent a significant and increasing portion of the emissions inventory in the South Coast Air Basin, adversely effecting regional air quality. The two primary pollutants resulting from diesel fuel combustion are particulate matter (PM) and oxides of nitrogen (NOx). PM typically constitutes the visible emissions from diesel engine exhaust, and it contains over 40 known cancer-causing substances.

PROPOSED METHOD OF CONTROL

This control measure envisions a regional truckway system comprising 142 center-line miles of dedicated truck lanes extending from the San Pedro Bay ports eastward toward Barstow. The dedicated truckway offers a viable and partially self-financing solution for mitigating congestion and reducing mobile source emissions. The system would have a graduated toll rate based on a number of factors including the relative emissions associated with each vehicle. The truck-only lane would potentially allow each truck to carry multiple containers, further improving the efficiency and financial viability of the system. The potential for requiring all trucks to use alternative clean technology or otherwise meet the 2010 on-road heavy-duty exhaust emissions standards is also being considered.

EMISSION REDUCTION

The preliminary emission reduction estimates are based on 100% of the port trucks using the truck-only lane and each tractor hauling two containers.

The emission reductions do not account for potential emission benefits of reduced regional congestion or of any control measures proposed by the San Pedro Bay Ports, the ARB, or AQMD.

The emission reduction commitments for AQMP control measures are discussed in Chapter 4 of the main volume of the AQMP. It is proposed that ARB take on the full legal commitment to backstop the reductions of this control measure if necessary; however, both SCAG and the AQMD have agreed to an annual review meeting to monitor the implementation of these measures and to explore additional controls that both the AQMD and SCAG can implement to backstop the original measures.

IMPLEMENTING AGENCY

A consortium under jurisdiction of Joint Powers Authority would be necessary to implement this control measure.